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Sequence Listing was accepted.

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Reviewer: Durreshwar Anjum

Timestamp: [year=2011; month=7; day=22; hr=10; min=37; sec=21; ms=407; ]

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Application No: 10576757

Version No: 6.0

**Input Set:****Output Set:****Started:** 2011-07-15 16:07:28.361**Finished:** 2011-07-15 16:07:29.802**Elapsed:** 0 hr(s) 0 min(s) 1 sec(s) 441 ms**Total Warnings:** 30**Total Errors:** 0**No. of SeqIDs Defined:** 30**Actual SeqID Count:** 30

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**Input Set:**

**Output Set:**

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**Error code**

**Error Description**

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# SEQUENCE LISTING

<110> Winter Sederoff, Heike  
Huber, Steven C  
Larabell, Carolyn A

<120> SYNTHETIC PEPTIDES THAT CAUSE F-ACTIN BUNDLING AND BLOCK ACTIN  
DEPOLYMERIZATION

<130> JIB-1571

<140> 10576757  
<141> 2011-07-15

<150> US 60/513,275  
<151> 2003-10-20

<160> 30

<170> PatentIn version 3.5

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peptide

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1 5 10 15

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<223> synthetic peptide derived from Drosophila melanogaster Actin 2  
protein and Homo sapiens beta and gamma Actin proteins

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Glu His Gly Ile Val Thr Asn Trp Asp Asp Met Glu Lys Ile Trp  
1 5 10 15

<210> 6

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<223> synthetic peptide derived from Drosophila melanogaster Actin 3,  
5, and 6 proteins and Homo sapiens alpha Actin protein

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Glu His Gly Ile Ile Thr Asn Trp Asp Asp Met Glu Lys Ile Trp  
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<210> 7

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Glu Asn Gly Val Val Arg Asn Trp Asp Asp Met Cys His Val Trp  
1 5 10 15

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Gly Asp Arg Val Leu Ser Arg Leu His Ser Val Arg Glu Arg Ile Gly  
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Lys

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<223> SS2 active peptide based on Zea mays SuSy 377-392

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Gly Ile Val Arg Lys Trp Ile Ser Arg Phe Glu Val Trp Pro Tyr Leu  
1 5 10 15

Lys Lys

<210> 11  
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<223> SS11 inactive synthetic peptide

<400> 11

Ile	Leu	Arg	Val	Pro	Phe	Arg	Thr	Glu	Asn	Gly	Ile	Val	Arg	Lys
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<400> 12

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<210> 13  
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<223> SS15 less active synthetic peptide

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<222> (6)..(6)  
<223> replaced Tryptophan residue with Alanines

<220>  
<221> SITE  
<222> (13)..(13)  
<223> replaced Tryptophan residue with Alanine

<400> 13

Gly	Ile	Val	Arg	Lys	Ala	Ile	Ser	Arg	Phe	Glu	Val	Ala	Pro	Tyr	Leu
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 1 5  
  
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 <223> NR11 inactive synthetic peptide  
  
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 Gly Pro Thr Leu Lys Arg Thr Ala Ser Thr Ala Phe Met Asn Thr Thr  
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 Ser Lys Lys  
  
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 peptide  
  
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Trp Ile Ser Arg Phe Glu Val Trp  
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<223> X=noroleucine

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<223> X=noroleucine

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Xaa Arg Arg Ile Ser Ser Val Glu Xaa Xaa Asp Lys Lys  
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<223> synthetic peptide of Drosophila melanogaster Actin protein  
consensus sequence

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Glu His Gly Ile Val Thr Asn Trp Asp Asp Met Glu Lys Ile Trp His  
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His Thr Phe Tyr  
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<210> 20  
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<212> PRT  
<213> Artificial

<220>  
<223> synthetic peptide derived from Homo sapiens ARP1 protein  
  
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<223> Core minimum block of SS12 sequence required for less active  
synthetic peptide  
  
<400> 22

Ser Arg Phe Glu Val Trp  
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<210> 23  
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<220>  
<223> SS synthetic peptide B  
  
<400> 23

Trp Ile Ser Arg Phe Glu Val Trp Pro Tyr Leu Lys Lys  
1 5 10

<210> 24  
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<220>

<223> SS synthetic peptide C

<400> 24

Glu Asn Gly Ile Val Arg Lys Trp Ile Ser Arg Phe Glu Val Trp Pro  
1 5 10 15

Tyr Leu Lys Lys  
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<210> 25

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<223> Consensus sequence of Synthetic Susy and ARP sequences

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<221> VARIANT

<222> (2)..(2)

<223> X=His or Asn

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<223> X= Val or Leu or Ile

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<222> (6)..(6)

<223> X= Arg or Thr or Lys

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<222> (7)..(7)

<223> X= Lys, Asn, Asp

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<222> (9)..(9)

<223> X= Ile or Asp or Asn

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<223> X= Arg or Met

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<223> X= Glu, Phe, Cys, or Lys

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<223> X= Ile, Leu, or Val

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<223> X= His or none

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<223> X= Phe or none

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Glu Xaa Gly Ile Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Xaa Trp Xaa  
1 5 10 15

Xaa Xaa Xaa Xaa  
20

<210> 26  
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<223> X= Glu, Phe, Cys, or Lys

<223> Motif for a synthetic peptide which causes actin bundling and  
inhbits actin depolymerization

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<221> VARIANT

<222> (2)..(2)

<223> X = any amino acid

<220>

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<222> (4)..(4)

<223> X = Ile or Val

<220>

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<223> X = any amino acid

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<222> (9)..(14)

<223> X = any amino acid

<400> 26

Glu	Xaa	Gly	Xaa	Xaa	Xaa	Xaa	Trp	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Trp
1			5				10							15

<210> 27

<211> 15

<212> PRT

<213> Artificial sequence

<220>

<223> Motif for a synthetic peptide that causes actin bundling and  
inhibits actin depolymerization

<220>

<221> VARIANT

<222> (2)..(2)

<223> X= Lys, Arg, or His

<220>

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<222> (5)..(5)

<223> X= Ala, Val, Leu, Ile, Phe, Trp, Pro, or Met

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<222> (6)..(6)

<223> X= Lys, Arg, or His

<220>

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<222> (7)..(7)  
<223> X= any amino acid

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<222> (9)..(13)  
<223> X= any amino acid

<220>  
<221> VARIANT  
<222> (14)..(14)  
<223> X= Ala, Val, Leu, Ile, Phe, Trp, Pro, or Met

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Glu Xaa Gly Ile Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Xaa Trp  
1 5 10 15

<210> 28  
<211> 16  
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<223> Formula (I) for active synthetic peptides

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<223> X = Ile, Val, or Leu

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<222> (4)..(4)  
<223> X = Arg, Lys, Asn, or Thr

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<221> VARIANT  
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<223> X = Arg, Lys, Asn, or Asp

<220>  
<221> VARIANT  
<222> (7)..(7)  
<223> X = Ile, Asp, Asn, or Glu

<220>  
<221> VARIANT  
<222> (8)..(8)  
<223> X = Ser, or Asp

<220>  
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<223> X = Arg, Met, or Ala

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<223> X = Phe, or Glu  
  
<220>  
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<222> (11)..(11)  
<223> X =Asp, Glu, Lys, Arg, or His

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<222> (12)..(12)  
<223> X =Val, or Ile

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<223> X =Pro, or His

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<223> X =Tyr, or His

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1 5 10 15

<210> 29  
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<223> X = Lys, Arg, or His

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<223> X = any amino acid

<220>  
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